

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Thomas C. Terwilliger

Docket No.: S-91,732

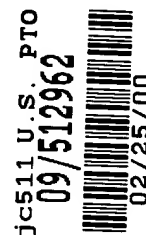
Serial No.:

Examiner:

Filed : February 25, 2000

Art Unit:

For : LIKELIHOOD-BASED MODIFICATION OF EXPERIMENTAL CRYSTAL  
STRUCTURE ELECTRON DENSITY MAPS



Assistant Commissioner for Patents  
Washington, DC 20231

**INFORMATION DISCLOSURE STATEMENT**  
**UNDER 37 CFR 1.56, 1.97, AND 1.98**

Sir:

The documents listed below, copies attached, may be material to the examination of the subject application and is therefore submitted in compliance with the duty of disclosure defined in 37 CFR 1.56.

1. Kevin D. Cowtan et al., "Improvement of Macromolecular Electron-Density Maps by the Simultaneous Application of Real and Reciprocal Space Constraints," International Union of Crystallography, D429, pp. 148-157, 1993.
2. Bi-Cheng Wang, "Resolution of Phase Ambiguity in Macromolecular Crystallography," Methods in Enzymology, Vol. 115, pp. 90-113, 1985.

**CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))**

I hereby certify that this correspondence is, on the date shown below, being:

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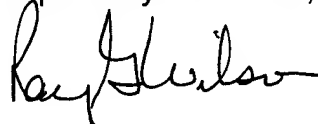
Ray G. Wilson  
(type or print name of person certifying)

3. Shibin Xiang et al., "Entropy Maximization Constrained by Solvent Flatness: a New Method for Macromolecular Phase Extension and Map Improvement," International Union of Crystallography, D49, pp. 193-212, 1993.
4. G. Bricogne, "Maximum Entropy and the Foundations of Direct Methods," International Union of Crystallography, A40, pp. 410-445, 1984.
5. G. Bricogne, "A Bayesian Statistical Theory of the Phase Problem. 1. A Multichannel Maximum-Entropy Formalism for Constructing Generalized Joint Probability Distribution of Structure Factors, A44, pp. 517-545, (1988).
6. Thomas C. Terwilliger et al., "Automated MAD and MIR Structure Solution", International Union of Crystallography, D55, pp. 849-861, (1999).
7. V. Yu. Lunin "Electron-Density Histograms and the Phase Problem," International Union of Crystallography, D49, pp. 90-99, (1993).

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional matter material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art under 35 U.S.C. 102.

It is requested that the above citations be made of record in the prosecution of this application.

Respectfully submitted,



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Dated: February 25, 2000